MICHIGA DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

March 15, 1990

TO: Stephen F. Schuesler and Kathleen Cavanaugh
Assistant Attorneys General
Environmental Protection Division
Department of Attorney General

FROM: William Creal and Chris Waggoner
Great Lakes and Environmental Assessment Section
Surface Water Quality Division

SUBJECT: HM Holdings/Allied Paper - Proposed Interim Remedial Action Involving Diversion of Portage Creek

We have reviewed three recent submittals from HM Holdings/Allied Paper related to the proposed interim remedial action which involves diversion of Portage Creek in the Bryant Mill Pond area. The three submittals are listed below.

* Draft Report - Conceptual Design Bryant Mill Pond Site, February, 1990.
* Draft Contract Documents - Stream Diversion Conceptual Design Bryant Mill Pond Site, February, 1990.
* Results of the Stream Diversion Design Studies, Portage Creek in Bryant Mill Pond, February 15, 1990.

These submittals were reviewed by Departmental staff of the Surface Water Quality, Environmental Response, and Land and Water Management Divisions, and staff of GZA/Donohue, our outside consultants on this matter. Their comments are incorporated into this memorandum. General comments are presented and followed by more detailed comments on technical issues.

GENERAL COMMENTS

The Department would like to clarify its position on the proposed diversion. The Department has not approved this proposed diversion and has considerable uncertainty and major concerns that the proposed diversion can be implemented in an acceptable manner. We still have only preliminary design information and general statements by HM Holdings/Allied Paper that they will address these concerns.

The only agreement between the State and HM Holdings/Allied Paper at this point in time is that a diversion of the stream will be necessary for any final remedy. At this time, the State has not agreed that a permanent diversion, as proposed, is necessary or feasible.

We are continuing to work cooperatively with HM Holdings/Allied Paper under the guidance of the Court as they study and develop design plans

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for the proposed diversion. We have reviewed the three recent submittals related to the proposed diversion as part of this process. Our comments are based upon the limited information provided to date. We may have additional comments as more details of the proposed diversion become available.

TECHNICAL ISSUES

This section presents specific comments on technical issues. All of the following comments need to be adequately addressed in the Final Diversion Design Document to be submitted by HM Holdings/Allied Paper on April 15, 1990. HM Holdings/Allied Paper has indicated, in both the draft Conceptual Design Report and Mr. Greg Peterson's February 15th letter to Mr. William Creal, their intent to address some of these issues in the Final Design Document. We have included our comments on these issues as well as issues not addressed by HM Holdings/Allied Paper in order to assist HM Holdings/Allied Paper in creating a Final Design Document which will adequately address the Department's comments. We are available to meet to discuss our comments and concerns with HM Holdings/Allied Paper.

Geotextile

1. We recommend that HM Holdings/Allied Paper consider extending the geotextile up between the rip/rap and sheet piling on the east side of the proposed diversion channel. This would facilitate holding the geotextile in place and minimize the potential for the geotextile to be pulled away from the sheet piling during construction activities on the west side of the proposed diversion channel.

Steel Sheet Piling

2. Cross section details must be provided to show how the sheet piling at the south end will be keyed into the present channel embankments to prevent flow around the cutoff wall into the mill pond. In addition the cross section must indicate whether the western side of the proposed diversion channel at the south end will be sheet piling, natural embankment or some other type of construction.

3. Sectional views of the proposed diversion channel at stations 13+00 and 25+00 show grade on the mill pond side at an elevation above the top of the sheet piling. All sheet piling must be set above grade to deflect mill pond runoff away from the proposed diversion channel.

4. Water has a tendency to leak through the interlocks of sheet piling. Grades adjacent to the mill pond side of the sheet pile wall must be sloped away from the wall to discourage ponding of water adjacent to the wall. Ponding next to the wall would tend to encourage leaching of contaminated fine particles from the mill pond area into the proposed diversion channel.

5. The east bank sheet piling at the south end of the channel will be prone to scouring at the toe (approximately stations 31+00 to

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32+50). The final design must incorporate measures to ensure that the scouring will not cause undermining and/or failure.

6. In the area around section 28+00, the natural west bank turns away from the proposed diversion channel. Contaminated sediments of the mill pond exist in this area. Will the entire inlet be excavated or is sheet piling on both sides of the proposed diversion channel proposed at this point?

7. The sheet piling must be designed to stand freely without lateral support from soils on the mill pond side from approximately above the peat layer. This is to accommodate future action involving excavation of the mill pond sediment. Design calculations for the wall must be submitted.

Alcott Street Dam Modification

The construction sequencing for dam modification is unclear. It appears that during modification of the dam the creek flows will be restricted to half of the present structure. The modification must be undertaken so the present situation is not exacerbated. The modification must be undertaken in a manner preventing erosion of exposed sediments in the present channel and preventing a back up of water into completed construction areas.

Construction Sequencing

Item 7.E, page 5 of the Conceptual Design Report is unclear. The reports states the eastern half of the proposed diversion channel from stations 30+00 to 32+00 will be constructed while stream flows are diverted into the western half of the proposed diversion channel. Yet the west half of the proposed diversion channel has not been built.

While the intent of the construction strategy at the north and south ends of the proposed diversion channel is generally understood, the sequencing of events is less clear. In fact there is more than one way to approach construction in these areas. In these areas, the primary concern is avoiding release of contaminated sediments into Portage Creek. The selected contractor may have some thoughts on how to approach this. Prior to the start of construction, a plan detailing the sequence of construction events would be required for Department review and approval.

Channel Elevation

11. It is not clear how the proposed diversion channel elevation will match up with the present channel elevation at station 32+00. Cross section information from the existing flood insurance study suggests that the present channel elevation in the vicinity of station 32+00 is about 782.1 feet above sea level. The proposed diversion channel elevation at this location appears to be about 779.2 feet above sea level. The proposed diversion channel slope may have to be adjusted to ensure that the proposed diversion channel will "match-up" with

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As indicated above, there are areas of known sediment contamination in the path of the proposed diversion channel. PCB contaminated soils will be excavated at the northern and southern ends of the channel. Sediments contaminated with high levels of mercury and metals may be encountered in the area of the previously discussed test pit seep (comment 15). In addition, benzene, ethylbenzene, toluene, xylene, chloroform, methylene chloride, benzo(k)fluoranthene, fluoranthene, phenanthrene, pyrene and trichloroethene were detected in the soil borings taken from the proposed diversion channel path. Construction of the proposed diversion channel may involve excavation of contaminated soil from the Panelyte property. Also, there may likely be excavation of contaminated soils on Performance Paper's property in relation to the storage tanks described in comment 16.

A plan for sampling excavated spoils to determine contaminant levels must be developed. The spoils could be sampled before or during construction. For each contaminant detected to date, the plan must identify the procedures for handling, transport and disposal for various levels of contamination. This includes levels which would require no restrictions on disposal, levels requiring disposal at licensed sanitary or hazardous waste landfills, levels requiring disposal at a TSCA licensed disposal facility and levels of contaminants for which no available licensed disposal facilities are available. Any proposed temporary or permanent on-site storage areas must be identified.

A sampling and analytical plan to confirm that contaminated soils will not be left buried in place under the proposed diversion channel must be developed.

Sediment Losses During Construction

23. As previously indicated in our performance requirements (your May 31, 1989 letter to Mr. Jon DeWitt), a sampling program will be required to ensure sediment losses off-site during construction are minimized to acceptable levels. Acceptability will be determined by both water sampling and visual observation. At a minimum, water sampling must be conducted at Cork Street and Alcott Street (downstream). Water samples must be taken and analyzed for Total Suspended Solids (TSS) and PCBs. TSS samples must be taken 3 times daily as grab samples and PCB once daily as a composite during construction. TSS samples must be analyzed individually the same day. If at the sampling downstream of Alcott Street the average TSS measurement exceeds 5 times that at Cork Street, construction activities must cease until corrective measures are taken and Department approval obtained to resume construction.

Visual observation must also be made of stream color and turbidity, at the time of TSS sampling. If the visual observation finds excessive and/or unusual color or turbidity, construction activities must cease until corrective measures are taken and Department approval obtained to resume construction.

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Storm Sewer and Outfall Relocations

24. The Conceptual Design Report indicates that storm sewers on the east bank of the mill pond can be tied into the proposed diversion channel. All present discharges to the mill pond from the east and west banks must be re-routed into the proposed diversion channel to minimize the amount of water which will collect in the present stream channel. The discharges from the east bank must be routed around the mill pond and not extended across the mill pond to minimize impediment to final remediation.

25. Water elevations in the proposed diversion channel are projected to be higher than water elevations in the present channel for similar flow events. This may result in water backing up into the outfalls. The invert elevations of any conduits routed into the proposed diversion channel must be examined to determine if backup could occur to such a degree that businesses, residences and streets in the vicinity could experience flooding. A review of the surrounding topography suggests that this is not likely to occur, however a review of the profile of these conduits is required to provide assurance.

26. If any outfalls are proposed for discharge through the sheet piling, the connection of the wall and pipe must be water tight to prevent leaking from inside the proposed diversion out onto the mill pond.

Present Stream Channel

27. The Conceptual Design Report indicates that final resolution of surface waters which collect in the present channel, if any, will be addressed in the final design. As previously indicated in our performance requirements, the water level in the present channel must be measured twice monthly. Any discharges from the present channel into Portage Creek must be measured and sampled and must meet Michigan Water Quality Standards.

28. The present channel is likely to accumulate contaminated sediments deposited from surface runoff originating from the mill pond. If an outlet or discharge of waters from the present channel is proposed, the release of these sediments must be controlled. The control measures to be implemented must be identified.

Public Access Restrictions

29. As previously indicated in our performance requirements, a physical barrier, such as a fence, must be employed during construction and maintained until final remediation is complete to restrict public access.

30. During normal and low water flows it appears that a vertical drop of 10 or more feet may exist from the top of the sheet piling down to the proposed diversion channel. The potential safety hazard must be evaluated and measures to address it must be considered. Fencing and

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posting the area with signs, together with some sort of barrier such as a railing or extending the sheet pile sufficiently above grade on the mill pond side to act as a wall might be possible approaches.

Post Completion Monitoring and Maintenance

31. The Conceptual Design Report indicates that an inspection and maintenance plan will be developed separately from the channel design. A separate document is acceptable, however it must be submitted with the final design on April 15th.

    The proposed diversion channel must be inspected monthly after high flow events. Inspection should consist of walking the entire stream and visually checking for settling, damage to the channel, debris and other indications that maintenance is required. Maintenance must be performed to keep the channel free of debris and its integrity intact as designed. A report of each inspection and any maintenance should be filed with the court.

32. The westerly side of the proposed diversion channel must be vegetated above the rip rap layer to minimize erosion.

Air Monitoring During Construction

33. The Conceptual Design Report indicates the air emissions monitoring program will be a separate document. This is acceptable, however it must be submitted with the final design on April 15th.

Property Ownership, Permits

34. The property owners on the east side of the mill pond may have riparian rights. Such rights must be identified and adequately addressed.

35. The buildings proposed for demolition and the owners must be identified.

36. The schedule for obtaining necessary permits, approval for moving utilities, property access and obtaining easements must be identified.

Panelyte Site

37. It is our understanding that the U.S. EPA (Grosse Ile Office) is considering various activities at the Panelyte site. Construction activities by HM Holdings/Allied Paper may have to be coordinated with the U.S. EPA, Grosse Ile Office.

Other Comments

38. The expected design life of the proposed diversion channel must be evaluated and an estimate of design life, and its basis, provided.

39. It is unclear what the type A and B ditches are proposed to be used for.

40. Department staff have received inquiries from concerned citizens in Kalamazoo regarding the plans for remediating Bryant Mill Pond. We suggest RM Holdings/Allied Paper consider holding a public meeting to inform the citizens of its current activities and future plans.

41. Mitigation and/or restoration of wetland impacts may eventually be required.

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